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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/971,949	10/05/2001	Joseph H. End III	TN205	4081

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Mark T. Starr  
Unisys Corporation  
Unisys Way, MS/E8-114  
Blue Bell, PA 19424

EXAMINER

NGO, CHUONG D

ART UNIT PAPER NUMBER

2193

DATE MAILED: 05/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/971,949

Applicant(s)

END, JOSEPH H.

Examiner

Chuong D. Ngo

Art Unit

2193

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-11 is/are allowed.
- 6) ☒ Claim(s) 12-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 12-14 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 12-14 are directed to a computer implemented method for performing a calculations, the input are numbers and the output are also numbers. In order for a claimed invention that is directed to such a method to be statutory, the claimed invention as a whole must be useful and accomplish a practical application. That is the claimed invention must transform an article or physical object to a different state or thing, or produce a useful, concrete and tangible result. *State Street*, 149 F.3d at 1373-74, 47 USPQ2d at 1601-02. Also see "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility", OG Notices: 22 November 2005. It is clear from claims 12-14 that claimed invention does not perform any physical transformation, and since the result of the invention is merely a determined value of a remainder without a practical application recited in the claims, it is not a useful, concrete and tangible result. Therefore, the claims do not assert a practical application for the invention, and thus are directed to non-statutory subject matter.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 2193

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 12 and 14 stand rejected under 35 U.S.C. 102(b) as being clearly anticipated by Tate et al. (3,733,477).

Tate et al. discloses in figure 1 a circuit for calculating and outputting a modulo value (the final partial remainder) including a plurality of subtraction circuits (24,26,28) for subtracting a common dividend signal (22) from test values signals (50,52,54,56,58,60,62) each representing a respective integer multiple of the divisor to produce remainder signals (66,68,70), a logic (158,160,162, see figure 3) for determining which of the remainder signals represents a true remainder, and a multiplexer (150,152,154,156, figure 3) for outputting the correct remainder as claimed.

6. Claims 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tate et al. (3,733,477).

It is noted that Tate et al does not specifically discloses that the dividend has a value ranging from 0 to 65535, and the divisor comprises a fixed value of 9973. However, the limitation is merely an intended field of use or an obvious application. A person of ordinary skill in the art

Art Unit: 2193

would have found it obvious to use the circuit of Tate et al. to calculate a remainder from those values as claimed because the circuit of Tate et al is clearly capable of operating on these values.

7. Claims 12 and 14 stand rejected under 35 U.S.C. 102(b) as being clearly anticipated by Yoshida (5,638,314).

Yoshida discloses in figure 1 a circuit for calculating and outputting a modulo value (the final partial remainder) including a plurality of subtraction circuits (3) for subtracting a common dividend signal from test values signals (outputs from 4) each representing a respective integer multiple of the divisor to produce remainder signals, a logic (8) for determining which of the remainder signals represents a true remainder, and a multiplexer (7) for outputting the true remainder as claimed.

8. Claims 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida (5,638,314).

It is noted that Yoshida does not specifically disclose that the dividend has a value ranging from 0 to 65535, and the divisor comprises a fixed value of 9973. However, the limitation is merely an intended field of use or an obvious application. A person of ordinary skill in the art would have found it obvious to use the circuit of Yoshida to calculate a remainder from those values as claimed because the circuit of Tate et al is clearly capable of operating on these values.

9. Claims 1-11 are allowed.

Art Unit: 2193

10. Applicant's arguments filed on 02/21/2008 have been fully considered but they are not persuasive with respect to claims 12-14 because these claims do not limit the method to provide a true remainder of the division of the dividend by the divisor in only a single iteration. Further, limitation that the dividend has a value ranging from 0 to 65535, and the divisor comprises a fixed value of 9973 is no more than an intended field of use or an obvious application. The circuits of Tate and Yoshida clearly can perform division on data in the claimed range. The fact that they can also perform outside of the claimed range is irrelevant.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuong D. Ngo whose telephone number is (571) 272-3731. The examiner can normally be reached on Tuesday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (571) 272-3719. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 09/971,949

Page 6

Art Unit: 2193

A handwritten signature in black ink, appearing to read 'Chuong D Ngo', with a stylized, cursive script.

Chuong D Ngo  
Primary Examiner  
Art Unit 2193

05/12//2005